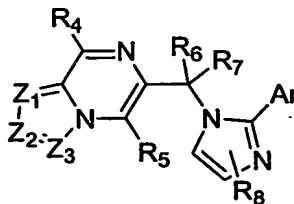


What is claimed is:

1. A compound of the Formula:



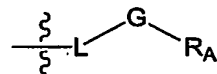
or a pharmaceutically acceptable form thereof, wherein:

Z₁ is nitrogen or CR₁; Z₂ is nitrogen or CR₂; Z₃ is nitrogen or CR₃; and at least one, but no more than two of Z₁, Z₂ and Z₃ are nitrogen;

Ar represents phenyl, naphthyl or 5- to 10-membered heteroaryl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, hydroxy, nitro, cyano, amino, C₁-C₈alkyl, C₁-C₈alkenyl, C₁-C₈alkynyl, C₁-C₈alkoxy, C₃-C₇cycloalkyl, (C₃-C₇cycloalkyl)C₀-C₄alkyl, (C₃-C₇cycloalkyl)C₁-C₄alkoxy, C₁-C₈alkyl ether, C₁-C₈alkanone, C₁-C₈alkanoyl, 3- to 7-membered heterocycloalkyl, C₁-C₈haloalkyl, C₁-C₈haloalkoxy, oxo, C₁-C₈hydroxyalkyl, C₁-C₈aminoalkyl and mono- and di-(C₁-C₈alkyl)amino(C₀-C₈alkyl);

R₁, R₂, R₃, and R₄ are each independently selected from:

- (a) hydrogen, halogen, nitro and cyano; and
- (b) groups of the formula:



wherein:

L is a single covalent bond or C₁-C₈alkyl;

G is a single covalent bond, -N(R_B)-, -O-, -C(=O)-, -C(=O)O-, -C(=O)N(R_B)-, -N(R_B)C(=O)-, -S(O)_m-, -CH₂C(=O)-, -S(O)_mN(R_B)- or -N(R_B)S(O)_m-; wherein m is 0, 1 or 2; and

R_A and each R_B are independently selected from:

- (i) hydrogen; and
- (ii) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, (C₃-C₈cycloalkyl)C₀-C₄alkyl, (3- to 6-membered heterocycloalkyl)C₀-C₄alkyl, (aryl)C₀-C₂alkyl or

(heteroaryl)C₀-C₂alkyl, each of which is substituted with from 0 to 4 substituents independently selected from halogen, hydroxy, nitro, cyano, amino, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₄alkanoyl, mono- and di-(C₁-C₄alkyl)amino, C₁-C₄haloalkyl and C₁-C₄haloalkoxy;

R₅ is C₁-C₆alkyl, C₂-C₆alkenyl, C₁-C₄alkoxy, or mono- or di-(C₁-C₄alkyl)amino, each of which is substituted with from 0 to 5 substituents independently chosen from halogen, hydroxy, nitro, cyano, amino, C₁-C₄alkoxy, C₁-C₂haloalkyl, C₁-C₂haloalkoxy, mono- and di-C₁-C₄alkylamino, C₃-C₈cycloalkyl, phenylC₀-C₄alkyl and phenylC₁-C₄alkoxy;

R₆ and R₇ are independently hydrogen, halogen, methyl or ethyl; and

R₈ represents 0, 1 or 2 substituents independently chosen from halogen, hydroxy, nitro, cyano, amino, C₁-C₄alkyl, C₁-C₄alkoxy, mono- and di-(C₁-C₄alkyl)amino, C₃-C₇cycloalkyl, C₁-C₂haloalkyl and C₁-C₂haloalkoxy.

2. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein R₈ represents 0 or 1 substituent selected from halogen, C₁-C₂alkyl and C₁-C₂alkoxy.

3. A compound or pharmaceutically acceptable form thereof according to claim 1 or claim 2, wherein Ar is substituted with 0, 1, 2 or 3 substituents independently selected from halogen, hydroxy, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, mono- or di-C₁-C₄alkylamino, C₂-C₄alkanoyl, (C₃-C₇cycloalkyl)C₀-C₂alkyl, C₁-C₂haloalkyl, and C₁-C₂haloalkoxy.

4. A compound or pharmaceutically acceptable form thereof according to claim 1 or claim 2, wherein Ar represents phenyl, pyridyl, thiazolyl, thienyl, triazolopyridyl, pyridizinyll or pyrimidinyl, each of which is substituted with from 0 to 4 substituents.

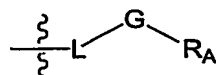
5. A compound or pharmaceutically acceptable form thereof according to claim 4, wherein Ar represents phenyl, pyridyl, thiazolyl, thienyl, triazolopyridyl, or pyridizinyll, each of which is substituted with from 0 to 3 substituents independently selected from chloro, fluoro, hydroxy, cyano, amino, C₁-C₄alkyl, C₁-C₄alkoxy, C₁-C₂alkylamino, C₁-C₂haloalkyl and C₁-C₂haloalkoxy.

6. A compound or pharmaceutically acceptable form thereof according to claim 5, wherein Ar represents phenyl, 2-pyridyl, 1,3-thiazol-2-yl, 2-thienyl, [1,2,4]triazolo[4,3-a]pyridin-5-yl or 3-pyridiziny, each of which is substituted with from 0 to 3 substituents independently selected from fluoro, chloro, hydroxy, C₁-C₂alkyl, cyano, and C₁-C₂alkoxy.

7. A compound or pharmaceutically acceptable form thereof according to claim 5, wherein Ar represents pyridin-2-yl, 2,6-difluorophenyl, 2,5-difluorophenyl, 3-fluorophenyl, 3-methyl-[1,2,4]triazolo[4,3-a]pyridin-5-yl, 3-fluoropyridin-2-yl or 6-fluoro-pyridin-2-yl.

8. A compound or pharmaceutically acceptable form thereof according to any one of claims 1-7, wherein R₁, R₂, R₃, and R₄ are independently selected from:

- (a) hydrogen, halogen or cyano; and
- (b) groups of the formula:



wherein:

- (i) L is a single covalent bond, methylene or ethylene;
- (ii) G is a single covalent bond, NH, N(R_B), O, C(=O)O or C(=O); and
- (iii) R_A and R_B are independently selected from (1) hydrogen and (2) C₁-C₆alkyl, C₂-C₆alkenyl, C₃-C₇cycloalkyl, 4- to 7-membered heterocycloalkyl, phenyl, thienyl, pyridyl, pyrimidinyl, thiazolyl, imidazolyl, pyrazolyl, pyridazinyl and pyrazinyl, each of which is substituted with from 0 to 4 substituents independently selected from hydroxy, halogen, cyano, amino, C₁-C₂alkyl and C₁-C₂alkoxy.

9. A compound or pharmaceutically acceptable form thereof according to claim 8 wherein R₁, R₂, R₃, and R₄ are independently selected from hydrogen, hydroxy, halogen, cyano, C₁-C₆alkyl, C₁-C₆alkoxy, C₃-C₇cycloalkyl, C₁-C₂alkoxyC₁-C₄alkyl, C₁-C₄hydroxyalkyl, C₁-C₂haloalkyl, C₁-C₂haloalkoxy, C₁-C₄carboxylate, mono- and di-(C₁-C₄alkyl)amino, phenylC₀-C₁alkyl, pyridylC₀-C₁alkyl and (4- to 7-membered heterocycloalkyl)C₀-C₁alkyl.

10. A compound or pharmaceutically acceptable form thereof according to Claim 9, wherein R_1 and R_4 are independently chosen from hydrogen, methyl and ethyl.
11. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein Z_1 is nitrogen, Z_2 is CR_2 and Z_3 is CR_3 .
12. A compound or pharmaceutically acceptable form thereof according to claim 11, wherein R_2 , R_3 and R_4 are independently chosen from hydrogen, halogen, C_1 - C_4 alkyl and C_1 - C_4 alkoxy, C_3 - C_7 cycloalkyl, C_1 - C_2 alkoxy C_1 - C_2 alkyl, C_1 - C_2 hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenyl C_0 - C_1 alkyl, pyridyl C_0 - C_1 alkyl and (4- to 7-membered heterocycloalkyl) C_0 - C_1 alkyl.
13. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein Z_1 is CR_1 , Z_2 is nitrogen and Z_3 is CR_3 .
14. A compound or pharmaceutically acceptable form thereof according to claim 13, wherein R_1 , R_3 and R_4 are independently chosen from hydrogen, halogen, C_1 - C_4 alkyl and C_1 - C_4 alkoxy, C_3 - C_7 cycloalkyl, C_1 - C_2 alkoxy C_1 - C_2 alkyl, C_1 - C_2 hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenyl C_0 - C_1 alkyl, pyridyl C_0 - C_1 alkyl and (4- to 7-membered heterocycloalkyl) C_0 - C_1 alkyl.
15. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein Z_1 and Z_2 are nitrogen and Z_3 is CR_3 .
16. A compound or pharmaceutically acceptable form thereof according to claim 15, wherein R_3 and R_4 are independently chosen from hydrogen, halogen, C_1 - C_4 alkyl and C_1 - C_4 alkoxy, C_3 - C_7 cycloalkyl, C_1 - C_2 alkoxy C_1 - C_2 alkyl, C_1 - C_2 hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenyl C_0 - C_1 alkyl, pyridyl C_0 - C_1 alkyl and (4- to 7-membered heterocycloalkyl) C_0 - C_1 alkyl.
17. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein Z_1 and Z_3 are nitrogen and Z_2 is CR_2 .
18. A compound or pharmaceutically acceptable form thereof according to claim 17, wherein R_2 and R_4 are independently chosen from hydrogen, halogen, C_1 -

C₄alkyl and C₁-C₄alkoxy, C₃-C₇cycloalkyl, C₁-C₂alkoxyC₁-C₂alkyl, C₁-C₂hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenylC₀-C₁alkyl, pyridylC₀-C₁alkyl and (4- to 7-membered heterocycloalkyl)C₀-C₁alkyl.

19. A compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 18 wherein R₆ and R₇ are both hydrogen.

20. A compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19, wherein R₅ is C₁-C₆ alkyl, C₂-C₆ alkenyl, C₁-C₄ alkoxy, or mono- or di-C₁-C₄alkylamino, each of which is substituted with from 0 to 2 substituents independently selected from halogen, hydroxy, C₁-C₂alkoxy, C₃-C₈cycloalkyl, phenylC₀-C₂alkyl and phenylC₁-C₂alkoxy.

21. A compound or pharmaceutically acceptable form thereof according to claim 20 wherein R₅ is ethyl, propyl, butyl, ethoxy or methoxymethyl.

22. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein the compound is chosen from:

6-[2-(6-fluoro-pyridin-2-yl)-imidazol-1-ylmethyl]-5-propyl-imidazo[1,2-a]pyrazine;
5-propyl-6-(2-pyridin-2-yl-imidazol-1-ylmethyl)-imidazo[1,2-a]pyrazine;
6-[2-(3-fluoro-pyridin-2-yl)-imidazol-2-ylmethyl]-5-propyl-imidazo[1,2-a]pyrazine;
6-[2-(6-fluoro-pyridin-2-ylmethyl)-1-methyl-5-propyl-imidazo[1,5-a]pyrazine;
6-[2-(3-fluoro-pyridin-2-yl)-imidazol-1-ylmethyl]-1-methyl-5-propyl-imidazo[1,5-a]pyrazine;
5-propyl-6-(2-pyridin-2-yl-imidazol-1-ylmethyl)-[1,2,4]triazolo[4,3-a]pyrazine;
3-methyl-5-propyl-6-(2-pyridin-2-yl-imidazol-1-ylmethyl)-[1,2,4]triazolo[4,3-a]pyrazine;
3-methyl-6-[2-(3-methyl-[1,2,4]triazolo[4,3-a]pyridin-5-yl)-imidazol-1-ylmethyl]-5-propyl-[1,2,4]triazolo[4,3-a]pyrazine;
6-{{2-(3-fluoropyridin-2-yl)-1H-imidazol-1-yl}methyl}-5-propyl[1,2,4]triazolo[1,5-a]pyrazine; and
6-{{2-(3-fluoropyridin-2-yl)-1H-imidazol-1-yl}methyl}-2-methyl-5-propyl[1,2,4]triazolo[1,5-a]pyrazine.

23. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein in an assay of GABA_A receptor binding the compound exhibits an K_i of 1 micromolar or less.

24. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein in an assay of GABA_A receptor binding the compound exhibits an K_i of 100 nanomolar or less.

25. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein in an assay of GABA_A receptor binding the compound exhibits an K_i of 10 nanomolar or less.

26. A pharmaceutical composition comprising a compound or pharmaceutically acceptable form thereof according to claim 1 in combination with a pharmaceutically acceptable carrier or excipient.

27. A pharmaceutical composition according to claim 26, wherein the pharmaceutical composition is formulated as an injectible fluid, an aerosol, a cream, a gel, a pill, a capsule, a syrup, or a transdermal patch.

28. A method for the treatment of anxiety, depression, a sleep disorder, attention deficit disorder, or Alzheimer's dementia, comprising administering to a patient in need of such treatment a GABA_A receptor modulatory amount of a compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19.

29. A method for potentiating a therapeutic effect of a CNS agent, comprising administering to a patient a CNS agent and a compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19.

30. A method for improving short term memory in a patient, comprising administering to a patient a GABA_A receptor modulatory amount of a compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19.

31. A method for altering the signal-transducing activity of GABA_A receptor, comprising contacting a cell expressing GABA_A receptor with a compound or

pharmaceutically acceptable form thereof according any one of claims 1 to 19 in an amount sufficient to detectably alter the electrophysiology of the cell, and thereby altering GABA_A receptor signal-transducing activity.

32. A method according to claim 31, wherein the cell recombinantly expresses a heterologous GABA_A receptor, and wherein the alteration of the electrophysiology of the cell is detected by intracellular recording or patch clamp recording.

33. A method for determining the presence or absence of GABA_A receptor in a sample, comprising the steps of:

- (a) contacting a sample with a compound or pharmaceutically acceptable form thereof according claim 1, under conditions that permit binding of the compound to GABA_A receptor;
- (b) removing the compound or pharmaceutically acceptable form thereof that is not bound to GABA_A receptor; and
- (c) detecting a level of the compound or pharmaceutically acceptable form thereof bound to GABA_A receptor;

and therefrom determining the presence or absence of GABA_A receptor in the sample.

34. A method according to claim 33, wherein the presence or absence of bound compound is detected using autoradiography.

35. A method for determining the presence or absence of GABA_A receptor in a sample, comprising:
determining background binding by, in order:

- (a) contacting a first sample with a measured molar concentration of a labeled compound that is known not to bind to GABA_A receptors, under conditions that permit binding of compounds to GABA_A receptors;
- (b) washing the first sample under conditions that permit removal of compounds that are not bound to GABA_A receptors; and
- (c) detecting as a background binding amount an amount of label remaining after washing;

and

determining GABA_A binding by, in order:

- (d) contacting with a labeled compound or pharmaceutically acceptable form thereof according to claim 1 a second sample matched to the first sample, said compound or pharmaceutically acceptable form thereof being present at the measured molar concentration of (a) and said contacting being carried out under the conditions used in (a);
- (e) washing the second sample under the conditions used in (b),
- (f) detecting an amount of label remaining in the second sample after washing; and
- (g) subtracting the background binding amount determined in (c) from the amount of label remaining in the second sample determined in (f)

wherein the remainder of a positive amount after the subtraction of (g) indicates the presence of GABA_A receptor in the second sample.

36. A method according to claim 35 wherein the amount of label remaining after washing of the first sample and the second sample is detected using autoradiography.

37. A packaged pharmaceutical preparation comprising a pharmaceutical composition according to claim 26 in a container and instructions for using the composition to treat a patient suffering from anxiety, depression, a sleep disorder, attention deficit disorder, Alzheimer's dementia, or short-term memory loss.

38. The use of a compound or pharmaceutically acceptable form thereof according to claim 1 for the manufacture of a medicament for the treatment of a condition selected from anxiety, depression, a sleep disorder, an attention deficit disorder, Alzheimer's dementia, and short-term memory loss.